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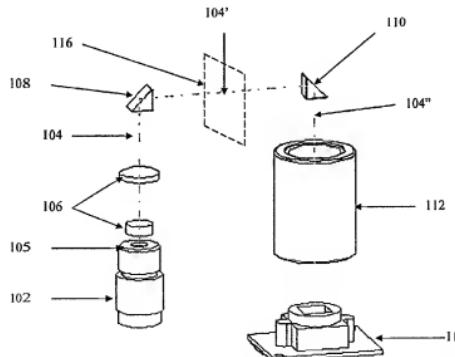
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(54) Title: **OPTICAL APPARATUS FOR MEASURING TOOLING POSITION WITHIN A SEAMING MACHINE**



(57) Abstract: The present invention provides an optical device for measuring characteristics of toolings (116), especially chuck and roll in a seamer. The optical device comprises a radiation source (102) adapted to generate radiation, means (106, 108) for diverting the radiation so as to pass through a profile in the toolings (116), and a detector (114) adapted to receive the radiation that passed through the profile. The characteristics of the toolings (116) such as the profiles of a gap between the chuck and the roll, are processed from the detected radiation that passes through the profile.

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C DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No
X	US 4,821,544 (TAMPLER et al) 18 April 1989 (18 04 1989), figures 1 and 3, column 2, lines 10-52	1-7 and 10-17
A	US 5,206,703 (HOLMES et al) 27 April 1993 (27 04,1993), figure 7	1-17
A	US 3,102,960 (E SICK) 03 September 1963 (03 09 1963), figure 1	1-17
A	US 3,809,907 (SCHULLER et al) 07 May 1974 (07 05 1974), figure 5	1-17
1 Further documents are listed in the continuation of Box C		See patent family annex
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